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Unusual Specimen of *Petroscirtes ancylodon* Rüppell from Eilat with Remarks on Blenniid Fish Depth Distributions (Pisces: Blenniidae)

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With 2 figures and 1 table

Summary

A specimen of *Petroscirtes ancylodon* Rüppell, 1838 was collected near Eilat, northern Red Sea. The specimen is of an unusually large size, and was living at an unusually great depth of 67 m on a sandy bottom, burying in the sand when threatened. Species of the family Blenniidae living at a depth of 25 m or more are summarized.

Zusammenfassung

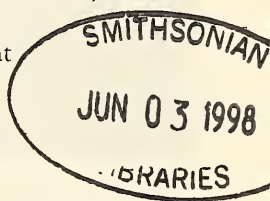
Im Roten Meer bei Eilat wurde ein Exemplar von *Petroscirtes ancylodon* Rüppell, 1838 gesammelt, das die bisher bekannte Totallänge dieser Art weit überschreitet, die Tiefenverbreitung mit 67 m weit unterschreitet und neue Erkenntnisse hinsichtlich der Ökologie dieser Art bringt. Es wird eine Übersicht der Arten der Familie Blenniidae gegeben, die tiefer als 25 m leben.

1. Introduction

The blenniid fish species *Petroscirtes ancylodon* has been revised thoroughly by SMITH-VANIZ (1976: 50–51). SMITH-VANIZ examined 90 specimens, with the maximum total length in females 78.6 mm, in males 91.5 mm. About the biotope in which nemophine blennies live he stated (p. 24–25):

“Most species of *Petroscirtes* are usually found near cover, often in the immediate vicinity of grass beds (*Thalassia* or *Zostera*) or floatsam such as *Sargassum*. *P. mitratus* and, especially *xestus* seem to prefer sandy bottom habitats and frequently occupy empty pelecypod shells. The deepest collection of a species of *Petroscirtes* was 18 meters but most collections have come from depths shallower than five meters.”

No observations of specimens burying in the sand have been made for species of *Petroscirtes*. SMITH-VANIZ just refers to MASUDA et alii (1979) who reported that



Xiphasia setifer Swainson, 1839, another species of the tribe Nemophini, buries in the sand if threatened.

An extraordinarily large specimen of *Petrosirtes ancylodon* was collected by the junior author in the northern Red Sea at a very unusual depth of 67 m. This specimen is described in the present paper; remarks on the depth distribution of blennioid fishes are added.

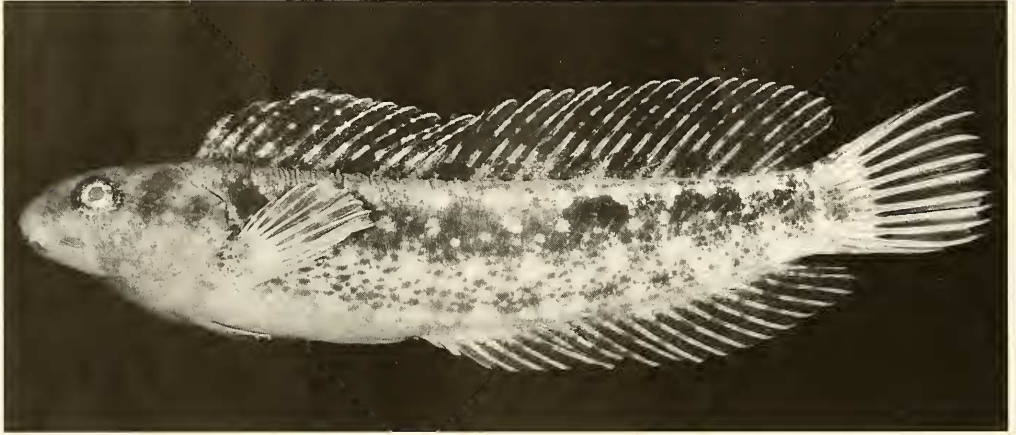


Fig. 1. *Petrosirtes ancylodon*, male, total length 132.0 mm, Red Sea, Gulf of Eilat.

2. *Petrosirtes ancylodon* Rüppell, 1838 (Fig. 1)

Material: SMNS 14304, 1 male, 106.5 mm SL, 132.0 mm TL, Red Sea, Gulf of Eilat/Aqaba, 6 km SW Eilat city centre, south of the Underwater Observatory, 29°29' N 34°56' E, 67 m depth, leg. A. MIROZ.

Description: Head length 28.7 mm; head depth 21.0 mm; preorbital 7.4 mm; eye diameter 5.7 mm; interorbital 9.7 mm.

Dorsal fin with XI, 19 elements, not indented between spinous and segmented portions. Anal fin with II, 19 elements, with unsegmented elements distally flattened and segmented elements with distal knobs. Anal fin beginning below 1st segmented dorsal fin ray. Pectoral fin rays 14/14, fin reaching back to level of 10th dorsal fin spine. Pelvic fin I₃/I₂, base beginning below base of 1st or 2nd dorsal fin spine. Caudal fin with 11 unbranched, segmented rays and dorsally and ventrally each three small unsegmented rays. Vertebrae 12 + 22 (including urostyle). Premaxillary with 35 incisiviform teeth, dentary with 38 teeth. A single small caniniform tooth in the premaxillary, a large in the dentary. Vomerine teeth lacking.

Branchial opening restricted to the side of the head, ventrally not reaching the pectoral fin base. Head lateral line pores: nasal pores 4, interorbital pores 4, circum-orbital pores 9/10, supratemporal pores 5. Canalis lateralis consisting of 8 single tubes without branches, caudally reaching level of 11th dorsal fin spine. Head with one pair each of symphyseal-mandibular, orbital, postorbital, nuchal, posttemporal and preopercular tentacles (Fig. 2).

Behaviour: When the diver approached this specimen, it buried vertically in the sand to a depth of twice its standard length.

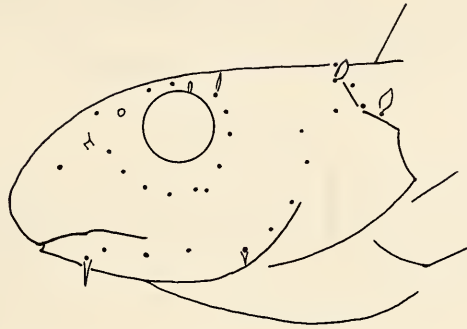


Fig. 2. *Petroscirtes ancyloдон*, pores of the head lateral line system and head tentacles.

3. Depth distribution of blennioid fishes below 25 m

Blennioid fish species rarely occur at depths below 25 m. The last paper on the depth distribution was by SPRINGER & SMITH-VANIZ (1970). As no recent findings were published, depth records of blennioid fishes from 25 m or below are summarized in the following (Tab. 1).

Tab. 1. Depth records of blennioid fishes from 25 m or below.

Tribe/Species	Depth [m]	No. spec.	Reference
Tribe Blenniini:			
<i>Blennius ocellaris</i>	26	1	HELDEN & WIRTZ (1985)
Linnaeus, 1758	50–100	36	HELDEN & WIRTZ (1985)
	100–365	13	HELDEN & WIRTZ (1985)
	366–439	1	HELDEN & WIRTZ (1985)
<i>Blennius normani</i>	20– 50	3	HELDEN & WIRTZ (1985)
Poll, 1949	50–100	44	HELDEN & WIRTZ (1985)
	more than 100	3	HELDEN & WIRTZ (1985)
	60–200	5	BATH & WIRTZ (1992)
<i>Parablennius gattorugine</i>	25		BATH, unpublished
(Brünnich, 1768)			
<i>Parablennius pilicornis</i>	25		BATH, unpublished
(Cuvier, 1829)			
<i>Spaniblennius rioudourensis</i>	17– 32	12	BATH & WIRTZ (1992)
(Metzelaar, 1919)			
Tribe Parablenniini:			
<i>Bathyblennius antholops</i>	101–128	1	SPRINGER & SMITH-VANIZ (1970)
(Springer & Smith-Vaniz, 1970)			
Tribe Salariini:			
<i>Ecsenius</i> spp.	30– 40		SPRINGER (1988)
Tribe Omobranchini:			
None living deeper than 25 m			SPRINGER & GOMON (1975)
Tribe Nemophini:			
<i>Petroscirtes ancyloдон</i>	67	1	present paper
<i>Xiphasia</i> spp.	25– 50		SMITH-VANIZ (1976)
<i>Xiphasia matsubarai</i>	178	1	SMITH-VANIZ (1976)
(Okada & Suzuki, 1952)			

Most of the blenniid fish species live in very shallow waters, often in the intertidal zone. Very few live deeper than 25 m.

4. Discussion

The specimen of *Petrosirtes ancylodon* collected in the northern Red Sea shows that males of that species may reach a total length of 132 mm. Formerly, only males up to 91.5 mm total length were known.

In spite of former observations, *P. ancylodon* does not depend on the nearby presence of a hard shelter. The species may live over sandy bottom and may bury in the sand if threatened.

The specimen was also collected at a very unusual depth, much deeper than any other species of the genus *Petrosirtes* collected before. It would seem important to search for blennies more carefully at greater depths.

5. References

- BATH, H. & P. WIRTZ (1992): On a collection of blenniid fishes from Mauritania, with a redescription of *Spaniblennius rioudourensis* (Metzelaar 1919). – Zool. Med., **66** (13): 265–276; Leiden.
- HELDEN, L. VON & P. WIRTZ (1995): A comparison of *BleNNius ocellaris* L. 1758, *B. rioudourensis* Metzelaar 1919, and *B. normani* Poll 1949 (Pisces, Blenniidae). – Spixiana, **8** (2): 197–217; München.
- MASUDA, H., C. ARAGA & T. YOSHINO (1975): Coastal fishes of southern Japan. – 382 pp.; Tokyo (Tokai University Press).
- SMITH-VANIZ, W. F. (1976): The saber-toothed blennies, tribe Nemophini (Pisces: Blenniidae). – Monogr. Acad. nat. Sci. Philad., **19**: VII + 196 pp.; Philadelphia.
- SPRINGER, V. G. (1988): The Indo-Pacific blenniid fish genus *Ecsenius*. – Smithsonian Contr. Zool., **177**: IV + 134 pp.; Washington D. C.
- SPRINGER, V. G. & M. F. GOMON (1975): Revision of the blenniid fish genus *Omobranchius* with descriptions of three new species and notes on other species of the tribe Omobranchiini. – Smithsonian Contr. Zool., **177**: III + 135 pp.; Washington D. C.
- SPRINGER, V. G. & W. F. SMITH-VANIZ (1970): *BleNNius antholops*, new deep-water fish, from the Gulf of Guinea, with comments on the bathymetric distribution of the family Blenniidae. – Proc. biol. Soc. Wash., **83** (20): 215–220; Washington D. C.

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